

APR. 25. 2005 4:49PM

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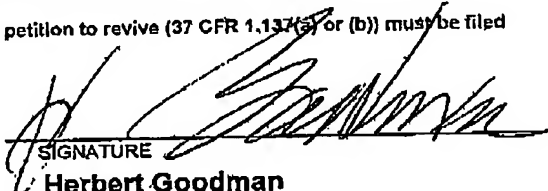
APR 25 2005 NO. 4450 ISO (P. 1/8)

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<b>TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371</b>		<b>ATTORNEY'S DOCKET NUMBER 05021/HG</b>
<b>INTERNATIONAL APPLICATION NO. PCT/JP2003/011881</b>		<b>U.S. APPLICATION NO. (If known, see 37 CFR 1.6) 10/522,698</b>
<b>INTERNATIONAL FILING DATE 18 September 2003</b>		<b>PRIORITY DATE CLAIMED 20 September 2002</b>
<b>TITLE OF INVENTION WAVELENGTH CONVERSION ELEMENT</b>		
<b>APPLICANT(S) FOR DO/EO/US Sunao KURIMURA; and Masaki HARADA</b>		
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:		
<p>1. <input type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a submission under 35 U.S.C. 371.</p> <p>2. <input checked="" type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a submission under 35 U.S.C. 371.</p> <p>3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.</p> <p>4. <input type="checkbox"/> The US has been elected (Article 31).</p> <p>5. <input type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> has been communicated by the International Bureau.</p> <p style="margin-left: 20px;">c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</p> <p>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> is attached hereto.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</p> <p>7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> have been communicated by the International Bureau.</p> <p style="margin-left: 20px;">c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</p> <p style="margin-left: 20px;">d. <input type="checkbox"/> have not been made and will not be made.</p> <p>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</p> <p>9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</p> <p>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</p> <p>Items 11 to 20 below concern document(s) or information included:</p> <p>11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</p> <p>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included:</p> <p>13. <input type="checkbox"/> A preliminary amendment.</p> <p>14. <input type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.</p> <p>15. <input type="checkbox"/> A substitute specification.</p> <p>16. <input type="checkbox"/> A power of attorney and/or change of address letter.</p> <p>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821-1.825.</p> <p>18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).</p> <p>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</p> <p>20. <input type="checkbox"/> Other items or information:</p>		

**CERTIFICATE OF FACSIMILE TRANSMISSION TO NO. 1-703-872-9306**  
I hereby certify this paper is being facsimile transmitted to the Patents and Trademarks Office on the date noted below.

Attorney: HERBERT GOODMAN  
dated: April 25, 2005

U.S. APPLICATION NO. (if known, see 37 CFR 1.5) <b>10/522,698</b>		INTERNATIONAL APPLICATION NO. <b>PCT/JP2003/011881</b>		ATTORNEY'S DOCKET NUMBER <b>05021/HG</b>	
21. The following fees are submitted:					
<input type="checkbox"/> a) Basic national fee.....				\$	300.00
<input type="checkbox"/> b) Examination fee.....				\$	200.00
<input type="checkbox"/> c) Search fee.....				\$	500.00
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<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.					
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Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$	.00
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	\$	
Total claims	- 20 =	0	x \$50.00	\$	.00
Independent claims	- 3 =	0	x \$200.00	\$	.00
MULTIPLE DEPENDENT CLAIM(S) (if applicable)				x \$360.00	\$ .00
<b>TOTAL OF ABOVE CALCULATIONS =</b>				\$	.00
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.				\$	.00
<b>SUBTOTAL =</b>				\$	.00
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				\$	.00
<b>TOTAL NATIONAL FEE =</b>				\$	.00
Fee for recording the enforced assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, §.31). \$40.00 per property				\$	.00
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				Amount to be refunded:	\$ .00
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<p>a. <input type="checkbox"/> A check in the amount of \$ _____ to cover the above fees is enclosed.</p> <p>b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>06-1378</u>. A duplicate copy of this sheet is enclosed.</p> <p>d. <input type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</p>					
NOTE: Where an appropriate time limit under 37 CFR 1.498 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.					
SEND ALL CORRESPONDENCE TO:					
<b>CUSTOMER NO. 01933</b>					
Herbert Goodman Frishauf, Holtz, Goodman & Chick P.C. 767 Third Avenue 25 <sup>th</sup> Floor New York NY 10017-2023					
 SIGNATURE <b>Herbert Goodman</b> NAME <b>17,081</b> REGISTRATION NUMBER					

**IN THE UNITED STATES PATENT  
AND TRADEMARK OFFICE**

Appl. No. : 10/522,698  
Applicant : Sunao KURIMURA et al  
Filed : March 11, 2005  
For : WAVELENGTH CONVERSION  
ELEMENT  
Docket No. : 05021/MJC  
Customer No.: 01933

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

S I R :

Submitted herewith is a copy of the English language International Search Report issued in International Application No. PCT/JP2003/011881, on which the present U.S. national phase application is based.

Copies of the references cited in the International Search Report should have been supplied by WIPO to the USPTO. Therefore, copies of the cited references in the International Search Report should be on file in the United States, in accordance with current practice.

Attached hereto are Forms PTO/SB/08A and PTO/SB/08B listing the particulars of the references cited in the International Search Report. As mentioned above, copies of the references should already be in the U.S. file, supplied by WIPO.

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CERTIFICATE OF FACSIMILE  
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TO NO. 1-703-872-9306

TOTAL PAGES: 8  
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Attorney: HERBERT GOODMAN

Dated: April 25, 2005

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necessary petition for  
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any other fee required in  
connection with this Paper,  
to Account No. 06-1378.

It is respectfully requested that the Examiner return an initialed copy of the attached Forms PTO/SB/08A and PTO/SB/08B to confirm that the publications supplied by WIPO and listed therein have been considered and made of record.

Respectfully submitted,

  
HERBERT GOODMAN  
Reg. No. 17,081

Frishauf, Holtz, Goodman  
& Chick, P.C.  
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RG/lpv

Enc: Forms PTO/SB/08A and PTO/SB/08B; International Search  
Report

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PTO/SB/08A (08-00)

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Substitute for Form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>			Application Number		10/522,698			
			Filing Date		March 11, 2005			
			First Named Inventor		Sunao KURIMURA et al			
			Group Art Unit					
			Examiner Name					
Sheet	1	of	2	Attorney Docket Number		05021/HQ		
<b>U.S. PATENT DOCUMENTS</b>								
Exam. Initials*	Cite No. <sup>1</sup>	Document Number	Kind Code <sup>2</sup>	Name of Patentee or Applicant	Publication Date MM-DD-YYYY	Relevant Portion		
		5,382,334 2001/0055453		PIONEER ELEC. CORP MATSUSHITA ELEC.	01-17-1995 12-27-2001			
<b>FOREIGN PATENT DOCUMENTS</b>								
Exam. Initials*	Cite No. <sup>1</sup>	Doc. No. <sup>3</sup>	Document Number <sup>4</sup>	Kind Code <sup>2</sup>	Name of Patentee or Applicant	Publication Date MM-DD-YYYY	Relevant Portion	T <sup>5</sup>
		JP	11-212128	A	MITSUBISHI MAT.	08-06-1999		
		JP	2002-122898	A	NIKON CORP.	04-26-2002		
		JP	03-237437	A	ASAHI GLASS CO.	10-23-1991		
Examiner Signature					Date Considered			

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 31). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. \* Place a check here if English translation is attached.

DATE MAILED: April 25, 2005

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PTO/SB/082 (08-00)

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Substitute for Form 1449A/FTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application Number		10/522,698	
				Filing Date		March 11, 2005	
				First Named Inventor		Sunao KURIMURA et al	
				Group Art Unit			
				Examiner Name			
Sheet	2	of	2	Attorney Docket Number		05021/HG	
<b>OTHER DOCUMENTS - NON-PATENT LITERATURE DOCUMENTS</b>							
Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	Include name of author (in CAPITAL LETTERS), title of article, title of item, date, page(s), volume-issue number(s), publisher, city and/or country where published					T <sup>2</sup>
		Tadashi KURIMURA et al, "Shigai Hacho Henkan o Mezashita Giji Iso Seigo Suisho", Oyo butsuri, Vol. 69, No. 5, pp. 548-552 (2000).  L. BABSAIL et al, "Second-harmonic generation in ion-implanted quartz planar waveguides, Appl. Phys. Lett., Vol. 59, No. 4, pp. 384-386 (22 July 1991).					
Examiner Signature				Date Considered			

<sup>1</sup> EXAMINER: Initial if document considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>2</sup> Unique citation designation number. \* Place a check here if English translation is attached.

DATE MAILED: April 25, 2005

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/11881

## A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl<sup>7</sup> G02F1/377

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl<sup>7</sup> G02F1/37

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Toroku Jitsuyo Shinan Koho	1994-2003
Kokai Jitsuyo Shinan Koho	1971-2003	Jitsuyo Shinan Toroku Koho	1996-2003

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

JICST, INSPEC, USPTO, Web Patent Database

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 11-212128 A (Mitsubishi Materials Corp.), 06 August, 1999 (06.08.99), (Family: none)	1-5
Y	JP 2002-122898 A (Nikon Corp.), 26 April, 2002 (26.04.02), (Family: none)	1-5
Y	Tadashi KURIMURA et al., "Shigai Hacho Henkan o Mezashita Giji Iso Seigo Suisho", Oyo butsuri, Vol.69, No.5, 2000, pages 548 to 552	1-5
Y	JP 03-237437 A (Asahi Glass Co., Ltd.), 23 October, 1991 (23.10.91), (Family: none)	2

☒ Further documents are listed in the continuation of Box C.
 ☐ See patent family annex.

* "A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier document but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 14 November, 2003 (14.11.03)	Date of mailing of the international search report 02 December, 2003 (02.12.03)
Name and mailing address of the ISA/ Japanese Patent Office	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/11881

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Babsail, L. et al., Second-harmonic generation in ion-implanted quartz planar waveguides, Appl. Phys.Lett., Vol.59, No.4, 22 July, 1991 (22.07.91), pages 384 to 386	2
Y	US 5382334 A (PIONEER ELECTRONIC CORP.), 17 January, 1995 (17.01.95), Column 6, lines 26 to 38 & JP 06-186603 A	3, 4, 5
Y	US 2001/0055453 A1 (MATSUSHITA ELECTRIC Industrial Co., Ltd., NGK INSULATORS Ltd.), 27 December, 2001 (27.12.01), & JP 2002-250949 A	3, 5